NW - 1002

DEPARTMENT OF ECOLOGY
State of Washington

Section 2.2
Capital Budget Grant Request Form
Watershed Plan Implementation and Flow Achievement

Project Title: Water Supply Pipeline to Bertrand Creek Watershed

County: Whatcom

WRIA: #1

If more space is needed attach additional sheets

1. Applicant Information

Applicant name Bertrand Watershed Improvement District	**Phone no.** (360) 354-1337	**Fax no.** (360) 354-0948
Address 1796 Front Street		
City Lynden	**State** WA	**Zip code** 98264
Email address bertrandwid@verizon.net		
Water right holder name (If applicable and if other than applicant)	**Phone Number** ( )	**Fax Number** ( )
Mailing address		
City	**State**	**Zip code**

2. Project Location

Project name Water Supply Pipeline to Bertrand Creek Watershed
Project location Bertrand Creek Watershed
Stream reach mile or location

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3. Project Type and Description

(Check all that apply)

Conservation and/or infrastructure improvement (pumps and pipes)	☒
Water storage feasibility study	☐
Water exchange or water right acquisition	☒

Please describe your project in detail

The Bertrand Watershed Improvement District (WID) was created to assist in increasing and sustaining the beneficial use of the land and water resources within the Bertrand Creek Watershed. The WID prepared a Comprehensive Irrigation District Management Plan (CIDMP). The CIDMP was intended to identify current uses of the watershed and projects that may assist in maintaining them. The two major uses identified in the CIDMP were aquatic habitat and irrigation for agricultural operations. An additional use not identified in the CIDMP is that for the consumptive use by human inhabitants.

The CIDMP also reported that fish species spawning in Bertrand Creek and/or its tributaries since the 1940's include Chinook, coho, chum, sockeye, and steelhead. Juvenile fish trap data collected by the Nooksack Indian Tribe in 2001-03 indicate the presence of juvenile coho, steelhead, and cutthroat trout, as well as non-game species including stickleback and sculpin in the Bertrand Creek watershed.

The land within the Bertrand Creek Watershed is predominantly used for agriculture, as it is a staple of the Whatcom County economy. The number of irrigated acres in the WID is estimated to be 7,418 acres. Crops grown in the watershed range from cash crops such as berries and seed potatoes to crops such as corn and grass which are used as feed on the numerous dairy farms present within the basin.

An additional need for water that exists in Whatcom County is for consumptive use by humans. Specifically, in the vicinity of the Bertrand Creek Watershed, the City of Lynden is in need of additional water rights to fulfill the use of its existing population. Also, within the vicinity of the watershed there are multiple small water purveyors whose sources currently do not meet the quality requirements of the Washington State Department of Health. Chemicals such as nitrate and EDB are being found at levels in exceedence of the State minimum contamination level.

A Phase 1 study is nearing completion that will result in providing needed information to the project sponsors and partners for the selection of the most feasible and cost effective alternate. This funding request will fund Phase 2 of the project which will be the engineering/design work on the chosen alternative. Phase 3 of the project will be the actual construction of the pipeline.

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Use this box to make any other comments regarding the project and water rights involved

Currently Public Utility District No 1 (PUD) withdraws water from the Nooksack River just downstream of the confluence of the Nooksack and Bertrand Creek. The PUD's water rights allow it to serve irrigation, municipal and industrial water supply to most areas of Whatcom County including the project area. The intention of this project is to determine the feasibility of the PUD conveying water to areas of need. The overall purpose of the project is to improve water management in the north county for the benefit of fish and the community.

This could be accomplished in two potential ways, (1) the PUD would supply water from their existing points of withdrawal to those in need and (2) the PUD could transfer its water right to other points of withdrawal points of those in need. Items to be analyzed are the infrastructure requirements including upgrades required by the PUD or other purveyors to be able to supply this water and pipelines to convey the water to those in need, economic feasibility and interest of those in need, as well as clarification of water right issues.

The first alternative of interest would be the supply or water from the existing point of withdrawal from the PUD. Both the City of Lynden and the agricultural irrigators within the Bertrand Watershed could utilize a pipeline constructed from the PUD intake to the southern portion of the Bertrand Watershed. Continuing the pipeline to the mid point of the watershed would allow the supply of water for irrigation to the majority of those that currently draw directly from Bertrand Creek. Completion of a pipeline to the northern limits of the watershed would allow connection to many more irrigators who draw water from wells in close proximity to the creek as well as allow for direct discharge into the creek for augmentation of in-stream flow.

The second alternative of interest would be the transfer of water rights from the PUD to the City of Lynden. As a part of this alternative, the City of Lynden would have the potential to supply water to the users in the Bertrand Watershed for agricultural irrigation and direct discharge to the creek for augmentation of in-stream flow. The water that would be supplied by the City of Lynden could potentially be in one of three forms, treated water distributed by a potable line, a dedicated line that supplied raw water from the intake, or a dedicated line that supplied water for re-use from the waste water treatment plant. All three of these options would most likely require the construction of a dedicated supply pipeline to the Bertrand Watershed, as the existing lines have not been sized for the large quantity of irrigation and flow augmentation water that would be required.

The funds requested in this project would be applied to final design of the option that is determined to be the most cost effective and acceptable to all parties. The objective of this project is to complete a design and the engineering needed to be ready to initiate construction. It will also support initial development of the financing plan.

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Describe the project by task (statement of work)

As describe above, there are two potential ways to meet the needs of all beneficial uses identified in the area, (1) the PUD would supply water from their existing points of withdrawal to those in need and (2) the PUD could transfer its water right to other points of withdrawal points of those in need. Each one of these alternatives requires additional analysis to determine the most economically and environmentally feasible method of achievement. With that information all parties will have the information to determine a preferred alternative to construct. The specific tasks required to complete this project are as follows:

Administration and Project Management –
Through the course of the project it will be necessary to have a liaison to document finances, coordinate between parties of interest, direct meetings of those parties, and oversee other project staff. This activity will be a critical and ongoing part of the success of this project.

Water Right Negotiations-
This project encompasses the use, transfer, consolidation, and or meeting the needs of individual water rights between multiple parties. Discussions will need to occur between each party within the group and the approving jurisdiction. This will also require the involvement of an individual who is competent in water law to guide each party in those discussions, and explore the available opportunities.

Define Pipeline Corridors-
For each of the two alternatives described above there are multiple pipelines required. The economic and environmental feasibility of this project is largely driven by the construction cost of these pipelines. The corridor, or route, which the pipe occupies, needs to be chosen to minimize the numerous cost, public impact, and environmental impacts.

Public Outreach to Establish Willing Participants-
There are numerous individual parties that stand to benefit from this project. Some of those will need to be contacted via mailings, and personal contact to establish their willingness to participate in the project. This task will encompass that effort, as well as bringing them into discussions with other participants, to help identify the required capacity of the pipeline as well as the pool to which the capital expenditures can be distributed to.

Determine Sizing Needs-
Each one of the pipeline alternatives needs to be sized to convey the appropriate amount of water which will be driven by a pumping system. Furthermore, as a part of this task will be identifying the amount of water required by each one of the alternatives.

Cost Estimation of the Alternatives-
The critical aspect to a financial feasibility study is the cost to which parties will pay in order to achieve the benefit. This task will estimate the capital expenditures required to construct each alternative.

Financial Feasibility Analysis-
With the information generated from the above tasks, a clear report can be generated that documents the anticipated costs of the overall project and how that may be distributed to all benefitting parties. As a part of this task, discussions will be instigated with those parties to determine the most viable alternative to construct.

4. Project Budget

Project Budget

$300,000

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Total budget by project task or by expenditure

1. Budget

Project implementation funds are appropriated by fiscal year. You must budget and spend carefully for both FY10 and FY11. Ecology cannot guarantee that any granted but unspent project funds from FY10 will be re-appropriated by the legislature to FY11.

FY10 = July 1, 2009 to June 30, 2010
FY11 = July 1, 2010 to June 30, 2011

	Budget by Element	FY 10	FY 11	Total
1.	Salaries	$ 0	$ 0	$ 0
2.	Benefits	$ 0	$ 0	$ 0
3.	Contracted services	$ 150,000	$ 150,000	$ 300,000
4.	Travel	$ 0	$ 0	$ 0
5.	Equipment[1]	$ 0	$ 0	$ 0
6.	Goods/services [2]	$ 0	$ 0	$ 0
7.	Overhead	$ 0	$ 0	$ 0
	Total Budget by Element	**$ 150,000**	**$ 150,000**	**$ 300,000**
	Budget by Task	**FY 10**	**FY 11**	**Total**
1.	Administration & Project Management	$ 20,000	$ 20,000	$ 40,000
2.	Water Right Negotiations	$ 25,000	$ 25,000	$ 50,000
3.	Define Pipeline Corridors	$ 35,000	$ 30,000	$ 65,000
4.	Public Outreach to Establish Willing Participants	$ 15,000	$ 25,000	$ 40,000
5.	Determine Sizing Needs	$ 30,000	$ 10,000	$ 40,000
6.	Cost Estimation of the Alternatives	$ 15,000	$ 20,000	$ 35,000
7.	Financial Feasibility Analysis	$ 10,000	$ 20,000	$ 30,000
	Total Budget by Task	**$ 150,000**	**$ 150,000**	**$ 300,000**
	Total Budget by Fiscal Year	**$ 150,000**	**$ 150,000**	**$ 300,000**

[1] Itemize all equipment and explain why the equipment is needed.
[2] Itemize all Goods and Services

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5. Funding Source Information

Total project amount expected to be provided by sources other than this program (dollar total and percent of project budget)
$11,400 plus value of landowner contributions via easements, etc.

Identify sources and type of funding other than through this program grant. Include expected dates of participation. Include as an attachment; letters of commitment, offer letters, application approvals, etc.

Source and type of funding: Bertrand Watershed Improvement District assessments

Amount: $11,400

Status:

Dates of participation: 2009-2011

Source and type of funding:

Amount:

Status:

Dates of participation:

Source and type of funding:

Amount:

Status:

Dates of participation:

Source and type of funding:

Amount:

Status:

Dates of participation:

Source and type of funding:

Amount:

Status:

Dates of participation:

Source and type of funding:

Amount:

Status:

Dates of participation:

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6. Instream Flow and other Instream Habitat Benefits

A. Water Right Information - Attach Water Right documents
(You may skip this section if this application is for Storage Feasibility Study funding)

Water right holder's name (if other than applicant)	Phone no: ( )	Fax no: ( )
Address		
City	State	Zip code
Complete legal description of the property attached to this water right:		
Water right number:		
Parcel number associated with this water right:		
Do you own the property proposed for this project? If not, please explain: No, we have a **LEASE OPTION EASEMENT AGREEMENT** in place which will be extended if the project receives the needed funds to proceed.		
If the grant applicant is not the water right holder, please explain the reason:		
Water source (Stream name).groundwater – in continuity with Bertrand Creek		

B. Water Usage

Has water been put to beneficial use in the past five years?

Yes ☒ No ☐ I don't know ☐

Describe that use in terms of the specific beneficial use during that period:

(Please attach any available documents that verify that use during the last five years. Include aerial photographs, power company records, flow meter records, crop type records, NRCS documentation or FSA records)

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Has beneficial use of this water ceased for a period of five or more years during any period since 1967?
Yes ☐ No ☒

Please describe the beneficial use for the water quantified under the water right discussed above. Describe the following: purpose (examples: domestic, irrigation, municipal); system type; if irrigation, describe crop type.

Quantify as nearly as possible current water use:

Instantaneous rate (QI) of use: CFS

Annual rate (QA) of use ACRE- FEET

Historic beneficial use quantity of the water right (highest of the last 5 years/ irrigation seasons in instantaneous and annual quantities)

_____ CFS _____ ACRE-FEET

If irrigation, how many acres are irrigated under this water right?

Are there other water rights associated with this specific water right?

In order to process this pre-application ecology requires the following information (include for the previous five years; please attach copies of all documents and maps)

- Power data (contact local power utility for pump records, etc.)
- Historical crop type data (contact local FSA office)
- Flow meter records (contact local power utility)
- Aerial photos (contact local FSA office)

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C. Estimated Total Water Savings

Infrastructure projects: Estimate the water to be conserved through this project. Provide engineering or technical analysis to support this estimate.

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
QA (ACRE-FEET)													
QI (CFS)													

D. Additional Instream Benefits

Describe other instream benefits envisioned as a result of funding this project:

7. Resources currently committed to ensure long-term performance of the proposed project (operation and maintenance).

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Who is responsible for long-term operation and maintenance of the project?
Bertrand Watershed Improvement District

Have operation and maintenance costs been identified? Yes ☒ No ☐

If yes, please describe: part of the feasibility analysis

Summarize these costs on an annual basis below:

Are measurement devices other than diversion source meters necessary to monitor compliance with the project intent or plan? Yes ☐ No ☐
If yes, please describe:

Does a water measurement device exist on the source and downstream of the proposed project?
☒ yes ☐ no

If no, will a water measurement device be installed as part of this project? Yes ☐ No ☐
If yes, describe location and operating entity:

If yes, provide the river mile:

What is the nearest stream gage downstream of the proposed project? Source name

Slater Road Bridge on Nooksack River

River mile :

8. Proponent's Readiness to Proceed

Describe status of feasibility reports, engineering design, and permits. Provide documentation for these deliverables and describe the project effort timeline as appropriate (submit two (2) copies of all required documents).

Feasibility Analysis essentially complete, available from PUD #1

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Does the project proponent own the land for the proposed project? If not, does the proponent have documented access to the right of way or owns an easement to the property proposed (please attach appropriate documentation including title report as applicable).

No, easements will be negotiated and will become part of the landowner's contribution to the project

Design/Engineering Status:

Pre-planning (pre - permitting)	☐	Status:
Pre-design (design reports) (10%)	☐	Status:
Schematic design (30%)	☐	Status:
Design development (75%)	☐	Status:
Construction documents (95%)	☐	Status:
Bid documents (ready for bid)	☐	Status:

Permit Status

SEPA	☐	Status:
401	☐	Status:
Dept. of Fish and Wildlife consultation	☐	Status:
Storage and/or Secondary Use Permit	☐	Status:
Other: (_____)	☐	Status:
Other:(_____)	☐	Status:
Other: (_____)	☐	Status:

9. Signatures (send this sheet electronically and by original signature in surface mail)

I certify that the information above is true and accurate to the best of my knowledge.

I understand that in order to process my application, I am hereby granting staff from the Department of Ecology access to the above site(s) for inspection and monitoring purposes.

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If assisted in the preparation of the above application, I understand that all responsibility for the accuracy of the information rests with me.

I also understand that I may rescind this application at any time prior to signing the Agreement with no other obligations or requirements.

_____ ____/____/____
(Applicant/ Grant Recipient) (Date)

_____ ____/____/____
(Water Right Holder) (Date)

_____ ____/____/____
(Land Owner(s) of Existing Place of Use) (Date)

For More Information Contact:

Dave Burdick
Voice: (360) 407-6094
Email: dbur461@ecy.wa.gov
Web: http://www.ecy.wa.gov/watershed/Index.html

If you need this document in an alternate format, please call the Water Resources Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

December 5, 2008

Item 100
(Volume 3 – Tab 4, tenth Set)

Document:

WRIA 1 Priority Ranking of 2009-2011 Washington State Department of Ecology Watershed Implementation Grant Requests

Administrative Summary:

The Washington State Department of Ecology requests that local watersheds prioritize grant applications submitted from their watershed for funding through the 2009-2011 Watershed Implementation Grant. The WRIA 1 Joint Board recommends the following priority order for the WRIA 1 sponsored 2009-2011 Watershed Implementation Grant proposals. The operating and capital budget proposals are prioritized separately.

Project	Sponsor	Priority	Grant Request
Operational Budget Projects			
Nooksack River Basin Stream Gaging Network	Lummi Nation	1	$317,742
WRIA 1 Instream Flow Negotiation Support	PUD No. 1	2	$250,000
South Fork Nooksack Water Budget	Nooksack Tribe	3	$110,000
DSS Implementation	Whatcom County	4	$153,000
WRIA 1 Water Quality Monitoring	Nooksack Tribe	5	$153,000
Capital Budget Projects			
Bertrand Flow Augmentation	Bertrand WID	1	~~$631,238~~ 291,020
Water Supply Pipeline to Bertrand Creek Watershed	Bertrand WID	2	$300,000
Pepin Creek Re-Alignment	City of Lynden	3	$2,480,000

The WRIA 1 Watershed Planning Staff Team (Staff Team) reviewed the proposals and supporting material prior to preparing a Staff Team recommendation. The Staff Team recommendation was distributed to the WRIA 1 Planning Unit for review and comment prior to submitting to the WRIA 1 Joint Board. A Background Document providing additional information on the above projects is attached to this signature page.

WRIA 1 Watershed Management Project Joint Board:

Merle Jefferson, Lummi Nation _____ 12/1/08 Date

Stephan Jilk, PUD #1 _____ Date

Bob Kelly, Jr., Nooksack Tribe _____ Date

Pete Kremen, Whatcom County _____ 12/3/08 Date

Dan Pike, City of Bellingham _____ 12/3/08 Date

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Stephan Jilk, PUD #1_____ Date _____

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WRIA 1 Watershed Management Project Joint Board:

Merle Jefferson, Lummi Nation_____ Date _____

Stephan Jilk, PUD #1 Stephan Jilk Date 12-2-08

Bob Kelly, Jr., Nooksack Tribe_____ Date _____

Pete Kremen, Whatcom County_____ Date _____

Dan Pike, City of Bellingham_____ Date _____

THIS DOCUMENT MAY BE SIGNED IN COUNTERPARTS

Washington Department of Ecology 2009-2011 Watershed Implementation Grants (Operating and Capital Budget Requests)

A summary table of grant requests received from WRIA 1 project sponsors that includes the WRIA 1 Watershed Planning Staff Team's recommendation for funding prioritization is provided below. The Staff Team used the Washington Department of Ecology criteria included in the application packets and considered the extent to which the proposals implement projects identified in the WRIA 1 Watershed Management Plan and/or WRIA 1 Detailed Implementation Plan to develop their recommendation for WRIA 1 Joint Board approval. The final WRIA 1 Joint Board priority ranking will be sent to the Washington State Department of Ecology (Ecology) with the applications by the December 5, 2008 deadline. Ecology will consider the local priorities as part of their funding process.

Proposal	Fund	Sponsor	Budget		Does it advance or implement actions identified in a WRIA 1 Project Document		WRIA 1 Staff Team Recommendation (Nov 14, 2008)
			Ecy Req	Other	WRIA 1 Watershed Management Plan	WRIA 1 Detailed Implementation Plan	
Nooksack River Basin Stream Gaging Network	Operational	Lummi Nation	$317,742		Advances LTMP	Implements LTMP	1
WRIA 1 Instream Flow Negotiation Support	Operational	PUD No. 1	$250,000		Implements ISF	Implements ISF	2
South Fork Nooksack Water Budget	Operational	Nooksack Tribe	$110,000		Advances ISF	Advances ISF	3
DSS Implementation	Operational	Whatcom County	$153,000		Implements technical element	Implements technical element	4
WRIA 1 Water Quality Monitoring	Operational	Nooksack Tribe	$153,000		Advances LTMP	Implements-LTMP	5
Bertrand Flow Augmentation	Capital	Bertrand WID	$631,238[1]	$14,000	Advances- ISF Pilot Action	Possibly Implements ISF	1
Water Supply Pipeline to Bertrand Creek Watershed	Capital	Bertrand WID	$300,000	$11,400 + other	Not identified	Possibly Implements ISF	2
Pepin Creek Re-Alignment	Capital	City of Lynden	$2,480,000	$500,000 (20%)	Indirectly advances Drainage Based Mgmt	Not identified	3

[1] Project sponsors have indicated the budget estimated is under revision with the new estimate for engineering around $200,000. This would reduce the project budget estimated by approximately $300,000.

WRIA 1Project Proposal Descriptions for

Washington Department of Ecology 2009-2011 Watershed Implementation Grants

The following descriptions were extracted from the proposals submitted for funding consideration, and are listed according to the WRIA 1 Watershed Planning Staff Team's recommended priority ranking.

Operating Budget Requests

1. Project/Sponsor: Nooksack River Basin Stream Gaging Network/Lummi Nation

Project Description: The Lummi Nation will use all of the awarded grant funds to support a Joint Funding Agreement with the U.S. Geological Survey (USGS) for the USGS to operate and maintain eight existing USGS stream flow measuring stations in the Nooksack River watershed over the July 1, 2009 through June 30, 2011 period and to operate and maintain eleven stream temperature probes over the same period including publishing the results.

Project Objectives: The overall objective of this project is to collect fundamental, reliable information on the spatial and temporal distribution of surface water quantity and quality in WRIA 1 so that the limited water resource can be effectively managed and the goals of the WRIA 1 Watershed Management Project (www.wria1project.wsu.edu) can be achieved. These goals include knowledge-based decision-making.

2. Project/Sponsor: WRIA 1 Instream Flow Negotiation Support/PUD No. 1

Project Description: The WRIA 1 Watershed Management Project (Project) produced a guidance document titled the Instream Flow Selection and Adoption Plan (Instream Flow SAP) to guide specific discussions about instream flows in WRIA 1. The Instream Flow SAP initiated the implementation of two instream flow pilot negotiations, one on the Middle Fork of the Nooksack River and the other on Bertrand Creek, a Nooksack tributary (Instream Flow Pilot Negotiations).

The proposal will continue ongoing implementation of the Instream Flow Pilot Negotiations, one of the highest priority actions listed in the WRIA 1 Instream SAP for the WRIA 1Watershed. Additionally, where flow is a limiting factor due, in part, to cumulative water withdrawals for out-of-stream use, implementation of the Instream Flow SAP is a recommended action.

Project Objectives: The expected result will be negotiated instream flows for settlement of tribal reserved rights and will provide recommendations to Ecology for possible amendment to the existing instream flow rule amendment (Chapter 173-501 WAC) for WRIA 1. With completion of the proposed project most of the highest priority Management Areas (sub-basin) will have negotiated instream flows.

3. Project/Sponsor: South Fork Nooksack Water Budget/Nooksack Indian Tribe

Project Description: develop water budget for South Fork Nooksack River. Use existing hydrologic data and Utah State University assembled general water budget in combination with data collected on groundwater discharge, precipitation, snow pack and weather conditions to estimate the components of the annual water budget.

Project Objectives: Refine South Fork water budget to support interpretation of the factors contributing to deficit flows. Examine the reason(s) for consistent deficit stream flows in the South Fork in relation to the minimum instream flows established under Ecology's IRPP (Ch 173-501 WAC). Results will be used to develop management strategies and projects to increase instream flows, particularly during summer months. Establish instream flow regulations that are representative of current hydrologic conditions and protective of endangered spring Chinook resident in the South Fork Nooksack River. Support ongoing WRIA 1 instream flow negotiations by providing better understanding of processes and factors influencing flow conditions.

4. Project/Sponsor: DSS Implementation

Project Description: A fundamental element of the WRIA 1 Watershed Management Project has been to construct a Decision Support System (DSS) that provides a sound scientific basis to water resource decision-making processes in the basin. The DSS, constructed by Utah State University for the WRIA 1 Watershed Management Project, is a technical tool for decision-makers' use in evaluating the impact of various management actions on water quality, water quantity, instream flow, and fish habitat. There must be some certainty of the quality of the results generated by the DSS in order for the DSS to be applied to on-the-ground land use decisions. This proposal retains a technical specialist to run a wide range of scenarios for the purpose of optimizing the DSS models, based on the scenario results prepare recommendations, if any, for optimizing the DSS as a tool for decision-making purposes, and communicate/explain the results to policy makers and the public. This proposal is not intended to substitute for peer review of the DSS and underlying models.

Project Objectives: Knowing the confidence level in the DSS results is imperative to stakeholder groups collaborating on water resource management. Expert opinion on the appropriate use of model results will go a long way in understanding the appropriate use of the DSS. Looking at newly proposed management alternatives will involve fine-tuning the models to optimize results. This proposal will allow us to make those changes and produce results that all the stakeholders can have confidence in. In addition to confidence in the modeling, the outputs from different scenarios will be made available to the public through the new WRIA 1 Watershed Management Project web page.

5. Project/Sponsor: WRIA 1 Water Quality Monitoring

Project Description: Water quality data will be collected to assess compliance with water quality standards, and causes or contributions to any detected violations. Data proposed for collection was identified in the WRIA 1 Detailed Implementation Plan to be used in watershed assessment and adaptive management.

Project Objectives: With a better understanding of water quality violations, management measures to improve degraded water quality can be identified and implemented. Monitoring data will be submitted to Ecology for consideration in the water quality assessment for the 303(d) candidate listing. Project data will be used locally to design and implement projects with the goal of improving water quality. Other land use and planning activities will be informed by water quality conditions identified with data collected as proposed.

Capital Budget Requests

1. Project/Sponsor: Bertrand Flow Augmentation/Bertrand WID

Project Description: The objective of this project is to increase summer instream flows in an important salmonid spawning reach of Bertrand Creek. The project would augment Bertrand Creek low summer flows with 1-2 cfs of groundwater pumped from wells. Water will be pumped from proven aquifer, aerated and transported via a new stream channel to the upper Bertrand Creek to double summer stream flows. The project has been identified by the Bertrand Watershed Improvement District (a formal coalition of agricultural landowners) and the Bertrand Instream Flow Technical Group as an early on the ground action toward resolving long standing conflicts over agriculture water use water use and salmon recovery in the Bertrand Basin. Bertrand Creek is a large, trans-boundary lowland tributary of the Nooksack River supporting spawning populations of ESA listed Puget Sound steelhead as well as fall chinook, coho, chum and sockeye salmon, and resident and sea-run cutthroat trout. Bertrand Creek likely provides habitat for juvenile life stages of ESA listed Nooksack early chinook and Puget Sound Bull trout as well as critical habitat for Nooksack Dace and the Salish sucker, both Canadian Species at Risk.

2. Project/Sponsor: Water Supply Pipeline to Bertrand Creek Watershed/Bertrand WID

Project Description: The Bertrand Watershed Improvement District (WID) was created to assist in increasing and sustaining the beneficial use of the land and water resources within the Bertrand Creek Watershed. The WID prepared a Comprehensive Irrigation District Management Plan (CIDMP). The CIDMP was intended to identify current uses of the watershed and projects that may assist in maintaining them. The two major uses identified in the CIDMP were aquatic habitat and irrigation for agricultural operations. An additional use not identified in the CIDMP is that for the consumptive use by human inhabitants.

The CIDMP also reported that fish species spawning in Bertrand Creek and/or its tributaries since the 1940's include Chinook, coho, chum, sockeye, and steelhead. Juvenile fish trap data collected by the Nooksack Indian Tribe in 2001-03 indicate the presence of juvenile coho, steelhead, and cutthroat trout, as well as non-game species including stickleback and sculpin in the Bertrand Creek watershed.

The land within the Bertrand Creek Watershed is predominantly used for agriculture, as it is a staple of the Whatcom County economy. The number of irrigated acres in the WID is estimated to be 7,418 acres. Crops grown in the watershed range from cash crops such as berries and seed potatoes to crops such as corn and grass which are used as feed on the numerous dairy farms present within the basin.

An additional need for water that exists in Whatcom County is for consumptive use by humans. Specifically, in the vicinity of the Bertrand Creek Watershed, the City of Lynden is in need of additional water rights to fulfill the use of its existing population. Also, within the vicinity of the watershed there are multiple small water purveyors whose sources currently do not meet the quality requirements of the Washington State Department of Health. Chemicals such as nitrate and EDB are being found at levels in exceedence of the State minimum contamination level.

A Phase 1 study is nearing completion that will result in providing needed information to the project sponsors and partners for the selection of the most feasible and cost effective alternate. This funding request will fund Phase 2 of the project which will be the engineering/design work on the chosen alternative. Phase 3 of the project will be the actual construction of the pipeline.

3. Project/Sponsor: Pepin Creek Re-Alignment/City of Lynden

Project Description: The Pepin Creek (Double Ditch) is a small, year round flowing tributary to Fishtrap Creek, with headwaters in Canada. Most of its 3 mile length in the US is conveyed in a parallel road side ditch system which is subject to routine maintenance dredging, lacks complex instream structure and has little riparian cover.

The objective of the Pepin Creek Re-establishment project is to relocate the lower one (1) mile sections of Double Ditch and Benson Road ditches from their current road side ditch locations to a new 150 foot wide by mile long corridor. Currently, Double Ditch Creek and Benson Road ditch do not provide the necessary flows in their respective channels for good habitat. Combining the systems into the common realigned Pepin Creek will provide enhanced stream flows, use, and habitat. A riparian corridor will be reclaimed with densely planted native vegetation and maintained to the "free to grow stage".

The first task of the project is to acquire the property needed for the project. The property targeted for acquisition within the City is the remaining undeveloped residential zoned property in the area and is the only viable route for the channel. The other parcels are within the City's UGA.

The construction phase will create a new meandering channel within the corridor and have complex instream structure and cover. At this time it is anticipated the low-flow channel would meander in an inner channel with the higher flow channel beyond this.